

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method comprising:

a Private Network-to-Network Interface (PNNI) route lookup procedure for a diverse route in an ATM network, wherein the procedure includes associating a first route with a first channel of two or more channels in a first dense wavelength division multiplex (DWDM) link;

associating a second route with a second channel of the two or more channels in the first dense wavelength division multiplex (DWDM) link;

associating a third route with a third channel of two or more channels in a second dense wavelength division multiplex (DWDM) link, the first route, the second route and the third route providing similar connections, the first DWDM link being different from the second DWDM link, the first DWDM link is associated with a first physical link identifier and the second DWDM link is associated with a second physical link identifier; ~~and~~

propagating the first and second physical link identifiers to nodes of the ATM network, within system capabilities information fields of PNNI PTSE packets; and

selecting the third route instead of the second route as a diverse alternate route to re-establish a connection that used the first route, by comparing the first physical link identifier with the second physical link identifier within received PTSE packets.

Claims 2-3 (Canceled).

4. (Currently Amended) A method of preselecting a diverse alternate route when using dense wavelength division multiplex (DWDM), comprising:

assigning a first physical link identifier received within a system capabilities information group of a PNNI PTSE packet to a first route, the first route using a channel in a first DWDM fiber link;

assigning a second physical link identifier received within a system capabilities information group of a PNNI PTSE packet to a second route, the second route using a channel in a second DWDM fiber link, wherein the second route and the first route have no common route segment; and

comparing the received first physical link identifier with the received second physical link identifier to select a diverse alternate route for the first route, wherein when the first physical link identifier is different from the second physical link identifier, the second route is selected as the diverse alternate route.

5. (Original) The method of claim 4, wherein the first route and the diverse alternate route provide connections to similar nodes.

Claims 6-8 (Canceled).

9. (Currently Amended) The method of claim 7~~1~~, wherein the first physical link identifier is implemented in a horizontal link information group.

10. (Currently Amended) A computer readable medium having stored thereon sequences of instructions which are executable by a digital processing system, and which, when executed by the digital processing system, cause the system to perform a method for preselecting a diverse alternate route when using dense wavelength division multiplex (DWDM), comprising:

receiving first and second physical link identifiers within system capabilities information fields of PNNI PTSE packets;

assigning ~~a~~ the received first physical link identifier to a first route, the first route using a channel in a first DWDM fiber link;

assigning ~~a~~ the received second physical link identifier to a second route, the second route using a channel in a second DWDM fiber link, wherein the second route and the first route have no common route segment; and

comparing the first physical link identifier with the second physical link identifier to select a diverse alternate route for the first route, wherein when the first physical link identifier is different from the second physical link identifier, the second route is selected as the diverse alternate route.

11. (Original) The computer readable medium of claim 10, wherein the first route and the diverse alternate route provide connections to similar nodes.

Claims 12-14 (Canceled).

15. (Currently Amended) The computer readable medium of claim ~~13~~10, wherein the first physical link identifier is implemented in a horizontal link information group.

16. (Currently Amended) A method, comprising:

associating a first route with a first channel of two or more channels in a first physical link;

associating a second route with a second channel of two or more channels in a second physical link, the first route and the second route providing connections to similar nodes; ~~and~~

receiving first and second physical link identifiers within system capabilities information fields of PNNI PTSE packets; and

selecting the second route as a diverse alternate route for the first route to re-establish a connection upon failure of the first route, by comparing ~~a~~the received first physical link identifier that is associated with the first route, with ~~a~~the received second physical link identifier that is associated with the second route and selecting the second route when the first physical link identifier is different from the second physical link identifier.

Claims 17-18 (Canceled).

19. (Original) The method of claim 16, wherein the second route is selected as the diverse alternate route for the first route before the first route fails.

20. (Currently Amended) A computer system, comprising:

a bus;

a data storage device coupled to the bus; and

a processor coupled to the data storage device, the processor operable to receive instructions which, when executed by the processor, cause the processor to perform a PNNI signaling method comprising:

associating a first route with a first channel of two or more channels in a first physical link;

associating a second route with a second channel of two or more channels in a second physical link, the first route and the second route providing connections to similar nodes; ~~and~~

receiving first and second physical link identifiers within system capabilities information fields of PNNI PTSE packets; and

selecting the second route as a diverse alternate route to re-establish a connection that used the first route, by comparing ~~a~~the received first physical link identifier that is associated with the first route, with ~~a~~the received second physical link identifier that is associated with the second route and selecting the second route when the first physical link identifier is different from the second physical link identifier.

Claims 21-22 (Canceled).

23. (Original) The system of claim 20, wherein the second route is selected as the diverse alternate route for the first route before the first route fails.

24. (Currently Amended) A computer system, comprising:

means for associating a first route with a first channel of two or more channels in a first physical link;

means for associating a second route with a second channel of two or more channels in the second physical link, the first route and the second route providing connections to similar nodes; ~~and~~

means for receiving first and second physical link identifiers within system capabilities information fields of PNNI PTSE packets; and

means for selecting the second route as a diverse alternate route to re-establish a connection upon failure of the first route, including means for comparing ~~a~~the received first physical link identifier that is associated with the first route, with ~~a~~the received second physical link identifier that is associated with the second route and means for selecting the second route when the first physical link identifier is different from the second physical link identifier.

25. Canceled.

26. (Previously Presented) The system of claim 24, wherein means for comparing the first physical link with the second physical link comprises means for associating the first physical link with a first physical link identifier and means for associating the second physical link with a second physical link identifier.

27. (Original) The system of claim 24, wherein the second route is selected as the diverse alternate route for the first route before the first route fails.